

**Notice of Allowability**

Application No.

10/768,530

Applicant(s)

RICHARDS ET AL.

Examiner

Anjan K. Deb

Art Unit

2858

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to CIP application filed 01/30/2004.
2. ☒ The allowed claim(s) is/are 1-39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20070307.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

1. This office action is in response to CIP application filed 01/30/2004.

#### *Examiner's Amendment/Comment*

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

#### *Specification*

In the Specification, page 1, first paragraph, line 2, insert after "2000," --now US Patent No. 6,674,289 B2, issued January 6, 2004--

#### *Drawings*

In the drawing, Figure 1 (see attached drawing corrections),

- added descriptive label --POLARITY DETECTOR--for box 92
- added descriptive label -- GROUND FAULT DETECTOR -- for box 16
- added descriptive label -- DELAY TIMER -- for box 86

3. New formal drawings in compliance with 37 CFR 1.121(d) are required in this application because they are hand drawn and lettering and numerals are difficult to read.

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Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Allowable Subject Matter***

4. Claims 1-39 are allowed.

***Reasons for Allowance***

5. The following is an examiner's statement of reasons for allowance:

The primary reason for allowance of the claims is the inclusion of device and method for introducing (generate/transmit) a simulated ground neutral fault during a first predetermined half cycle of the AC power. The above limitation found in all of the independent claims is novel and is neither disclosed nor fairly suggested in the prior art considered individually or in combination.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MacKenzie et al. (U.S. 5,459,630) describes a passive test circuit that simulates neutral to ground faults.

Tiemann (US 6,472,882 B1) describes breaker test circuit producing simulated ground-neutral fault.

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While the above cited prior art references disclose simulated ground-neutral fault none of these references teach or fairly suggest introducing simulated ground neutral fault signal during a first predetermined half cycle of the AC power.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is 571-272-2228. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached at (571) 272-2168.



**Anjan K. Deb, P.E, Ph.D.**

Primary Patent Examiner

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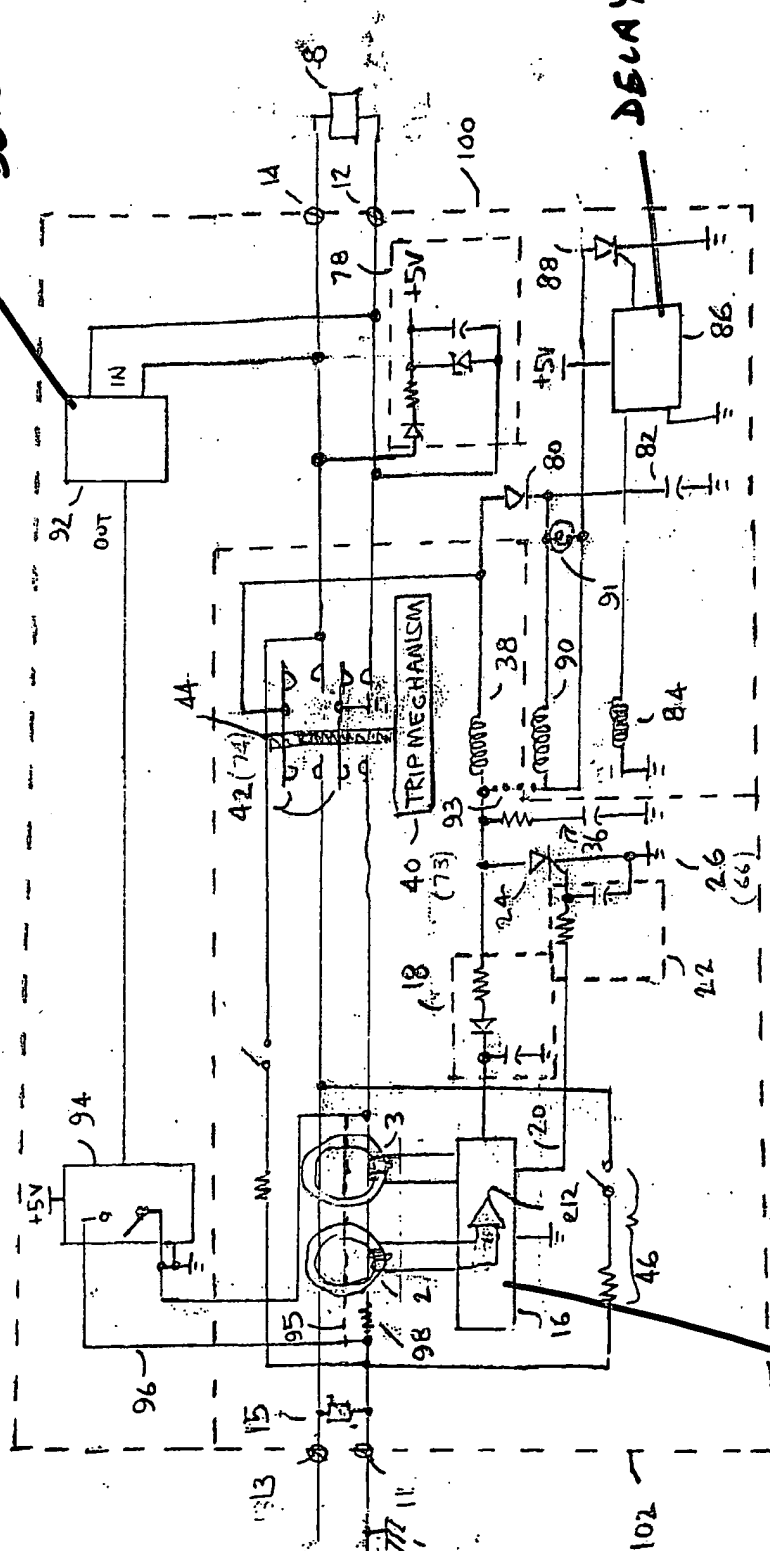
3/8/07

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POLARITY  
DETECTOR

10



DELAY TIMER

GROUND FAULT  
DETECTOR

Figure 1.

AD-6  
3/8/2007